Remarks

The above Amendments and these Remarks are in reply to the Office action mailed November 5, 2003. No fee is due for the addition of any new claims. An appropriate Petition for Extension of Time to Respond is submitted herewith, together with the appropriate fee. An Information Disclosure Statement is submitted herewith.

Claims 10-34 and 37-43 were pending in the Application prior to the outstanding Office Action. In the Office Action, the Examiner rejected all pending claims under 35 U.S.C. 112. The present Response amends claims 10-29, 31, 33, 34 and 37-43, leaving for the Examiner's present consideration claims 10-34 and 37-43. Reconsideration of the rejections is requested.

I. REJECTIONS UNDER 35 U.S.C. 112

The Examiner rejected claims 10-34 and 37-43 under 35 U.S.C. 112, second paragraph, as being indefinite in their use of the terms "pin", "unbroken conductive path", "uncoupled", "in communication with" and "multiple independent clock domains". Applicants have made a number of changes to the claims, and will discuss each of these claim terms in sequence.

A. "Pin"

The Examiner states that the use of the term "pin" is unclear in independent claims 10, 17, 27 and 37.

Applicants have changed the word "pin" in all claims to "conductive pin segment". Applicants believe that this clarification, which does not itself narrow the claim scope, answers

most of the questions that the Examiner raised regarding the term "pin". As used in these claims, the term "pin" is now merely a name, a handle, for the conductive segment, for purpose of providing an antecedent basis for subsequent claims and claim elements.

The word does not by itself, as used in these claims, imply any connection to an input or output of the function block. Rather, where a connection to an input or output of the function block is called for, the claim language itself includes that limitation explicitly.

For example, claim 10 now includes a step of:

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wherein each conductive pin segment carries a
respective input or output,
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As can be seen, the fact that the conductive pin segment carries an input or output is called for explicitly in the claim, rather than being implied from the use of the word "pin".

Similarly, the fact that the term does not refer to "the metal within a via hole", is established by the fact that the claim calls for the conductive pin segments to be included in a "conducting layer", not between layers.

Accordingly, Applicants believe that the objection to the word "pin" has been overcome.

B. "Unbroken Conductive Path"

The Examiner states that the term "unbroken conductive path" is unclear, because it is not clear in what *sense* the conductive path is to be "unbroken".

The claims have been amended to clarify that the conductive path be "electrically" unbroken. Again, Applicants do not believe that this change by itself narrows the claim scope,

since it is believed that a person of ordinary skill would have understood this meaning from a reading of the specification.

Specifically with respect to claims 11 and 12, the Examiner says that is not clear how an "unbroken" conductive path can be formed on two layers. Applicants have amended these claims to clarify that the electrically unbroken conductive path "includes portions" formed on two conducting layers. Again, this is a clarification and does not narrow the claim scope.

Applicants believe that the objection to the term "unbroken conductive path" has been overcome.

C. "Uncoupled"

The Examiner states that the term "uncoupled" is unclear. The Examiner suggested "ohmically uncoupled" instead.

The claims have been amended to use the phrase "ohmically unconnected" instead, to distinguish over capacitive and magnetic couplings. As amended, the claim calls for the absence of an ohmic connection, and makes no restrictions on capacitive or magnetic couplings, or indeed non-electrical couplings. Again, this is a clarification and does not narrow the claim scope.

Specifically with respect to claim 13, the Examiner asks whether the coupling called for therein means that the uncoupled parts, as required by claim 10, are to be coupled by a subsequent wiring layer. Applicants submit that the answer will be clear from the wording of the claims as amended. In particular, parent claim 10 calls for the electrically unbroken conductive path to be, within the predesigned routing structure, ohmically unconnected to the respective

conductive pin segment. Claim 10 therefore does not preclude an additional layer (such as a "customized conducting layer"), *not* part of the predesigned routing structure, which *does* ohmically connect the electrically unbroken conductive path to the respective conductive pin segment. Dependent claim 13, in fact, adds a limitation that does call for such a customized conducting layer, electrically connecting selected electrically unbroken conductive paths to selected conductive pin segments.

Applicants believe that the objection to the term "uncoupled" has been overcome.

D. "In Communication With"

With respect to claim 10, the Examiner asks for clarification of the language calling for a conductive pin segment to be "in communication with" an input or output.

Applicants have changed the claims to clarify that the conductive pin segments "carry" respective input's or outputs. Again, this amendment is a clarification only and does not narrow the claim scope. Applicants believe that the Examiner's objection has been overcome.

E. "Multiple Independent Clock Domains"

The Examiner objected to a number of claims on the ground that in the phrase "multiple independent clock domains", it is unclear what is meant by "independent".

Applicants have deleted the term "independent" from these claims since the word is not believed to be required for novelty or unobviousness. The remaining phrase, "multiple clock domains," is a well-known term that will be understood by persons of ordinary skill in the art.

With respect to claim 36, the Examiner questions how "plurality" in claim 34 became "four" in claim 36. This was a typographical claim dependency error which has now been corrected.

Accordingly, Applicants believe that the Examiner's objection has been overcome.

II. OTHER MATTERS AND CONCLUSION

The Examiner cited but did not apply the Hirose reference. The Examiner stated that Hirose shows many of the features encompassed by the claim language.

Despite some superficial similarities with some of Applicants' claims, upon careful inspection is respectfully submitted that Hirose does not actually teach or suggest the limitations of Applicants' claims.

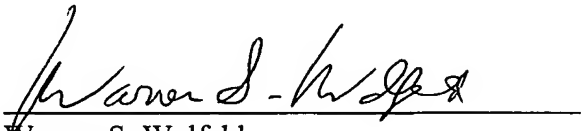
In light of the above, it is respectfully submitted that all of the claims now pending in the subject patent application should be allowable, and a Notice of Allowance is requested. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

Enclosed is a PETITION FOR EXTENSION OF TIME UNDER 37 C.F.R. § 1.136 for extending the time to respond up to and including May 5, 2004.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 50-0869 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

Date: April 30, 2004

By: 

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